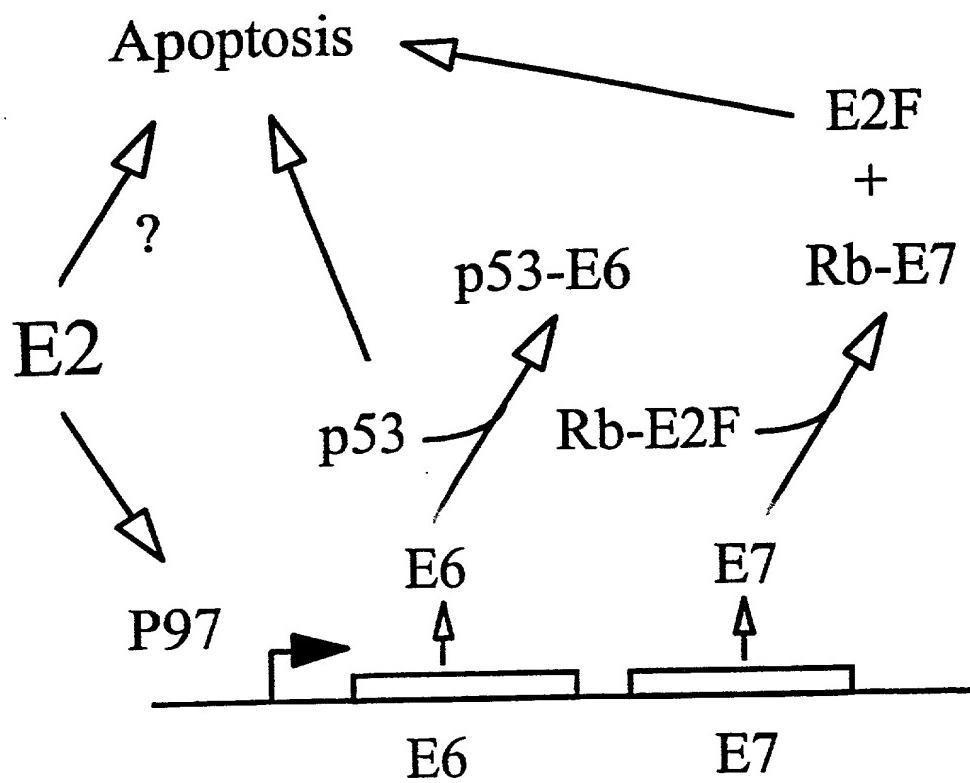


Fig. 1

1/23



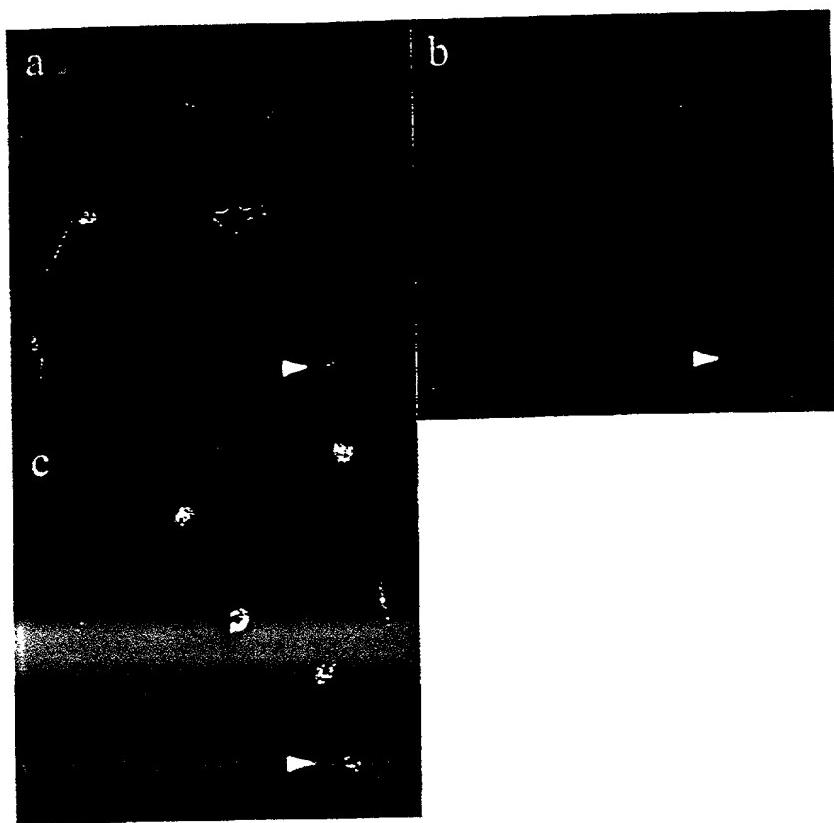
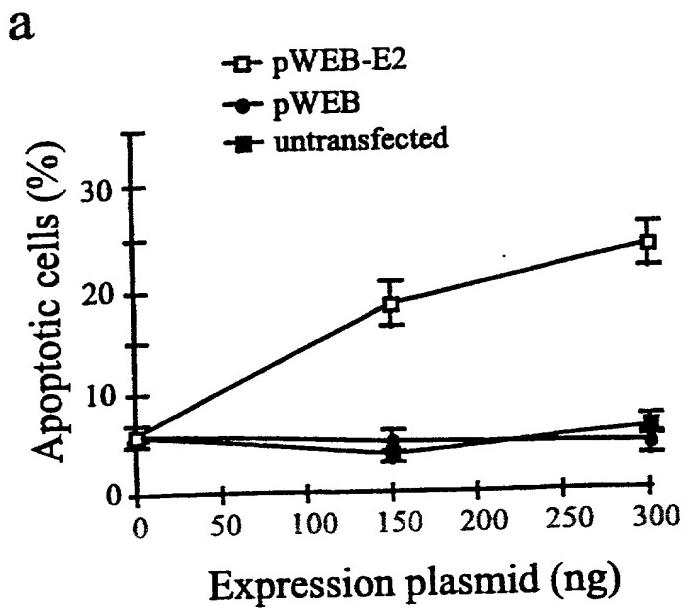


Fig. 2

Fig. 3A



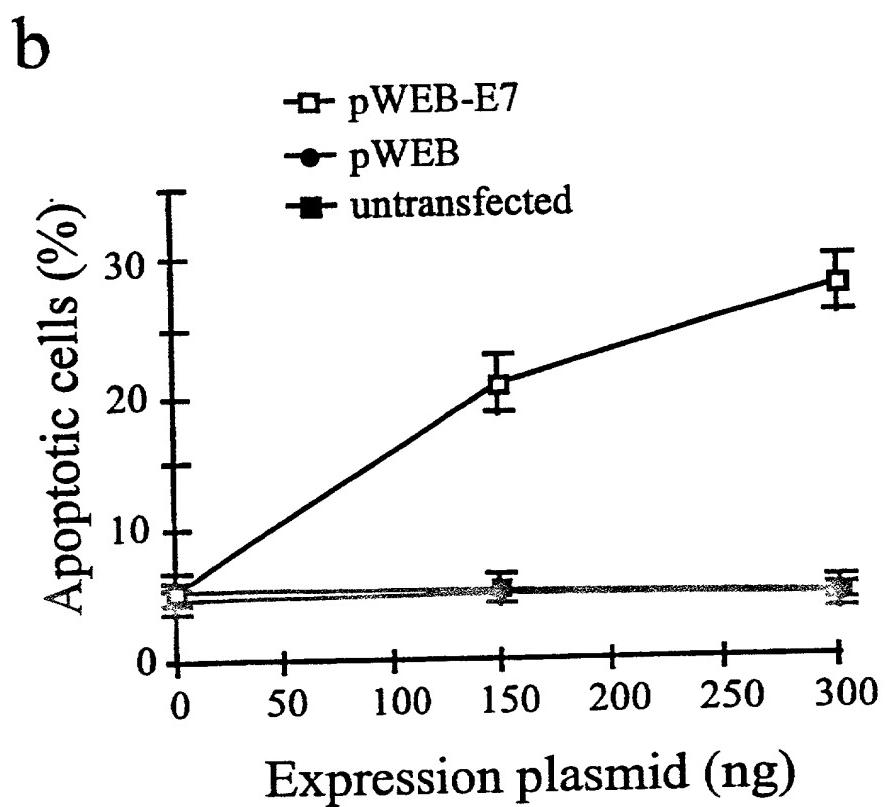


Fig. 3B

Fig. 4

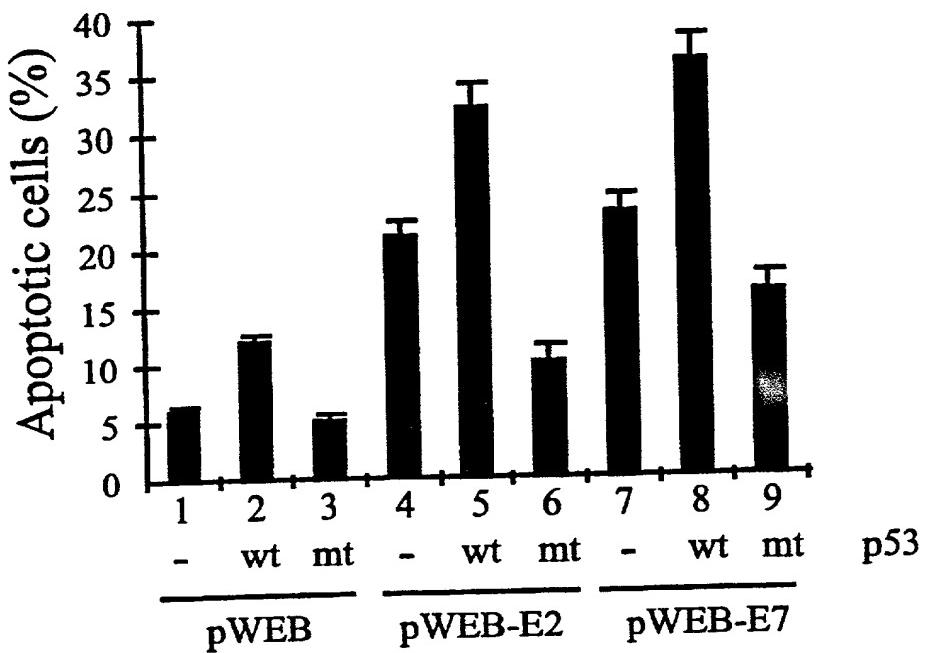
**a**

Fig. 4B

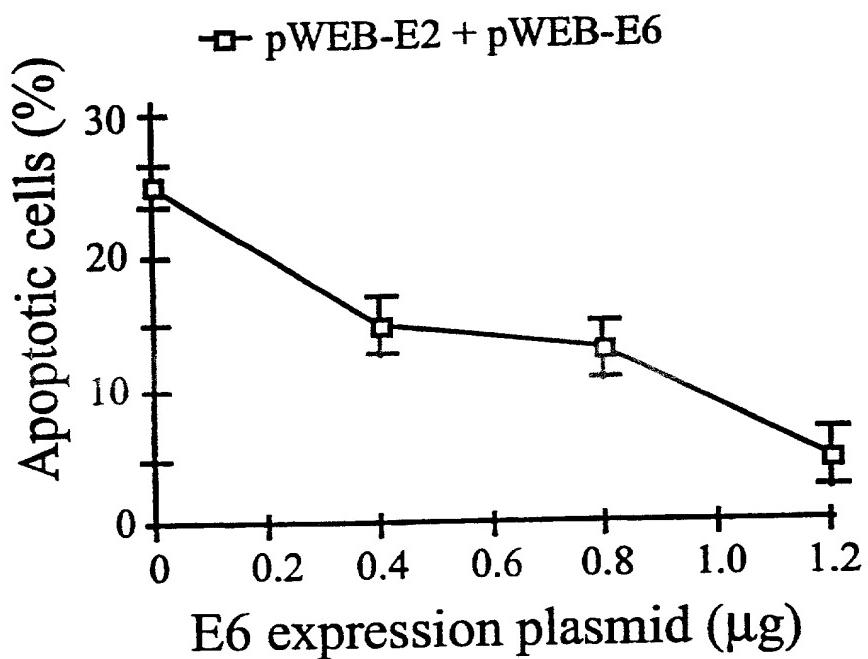
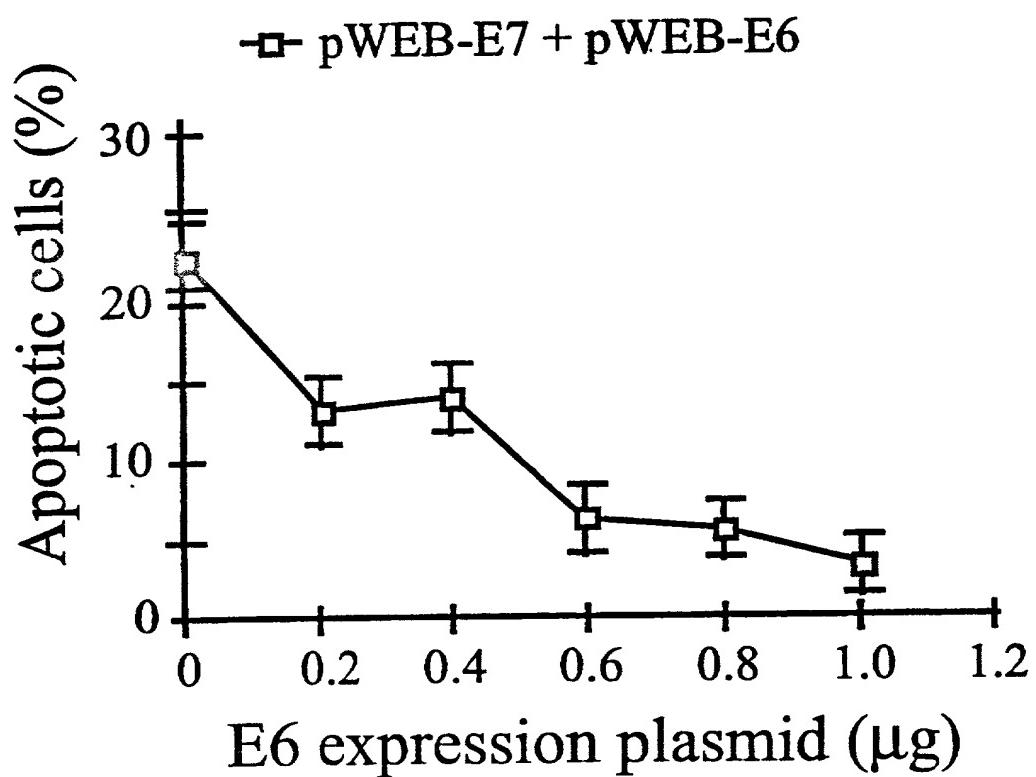
**b**

Fig 4C

**C**

8/23

Fig 5A

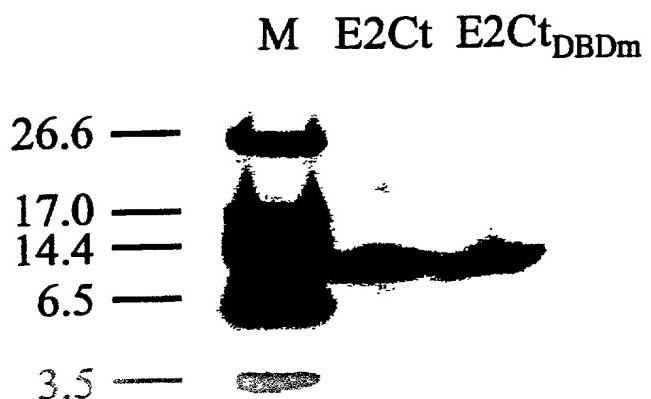
**a**

Fig 5B

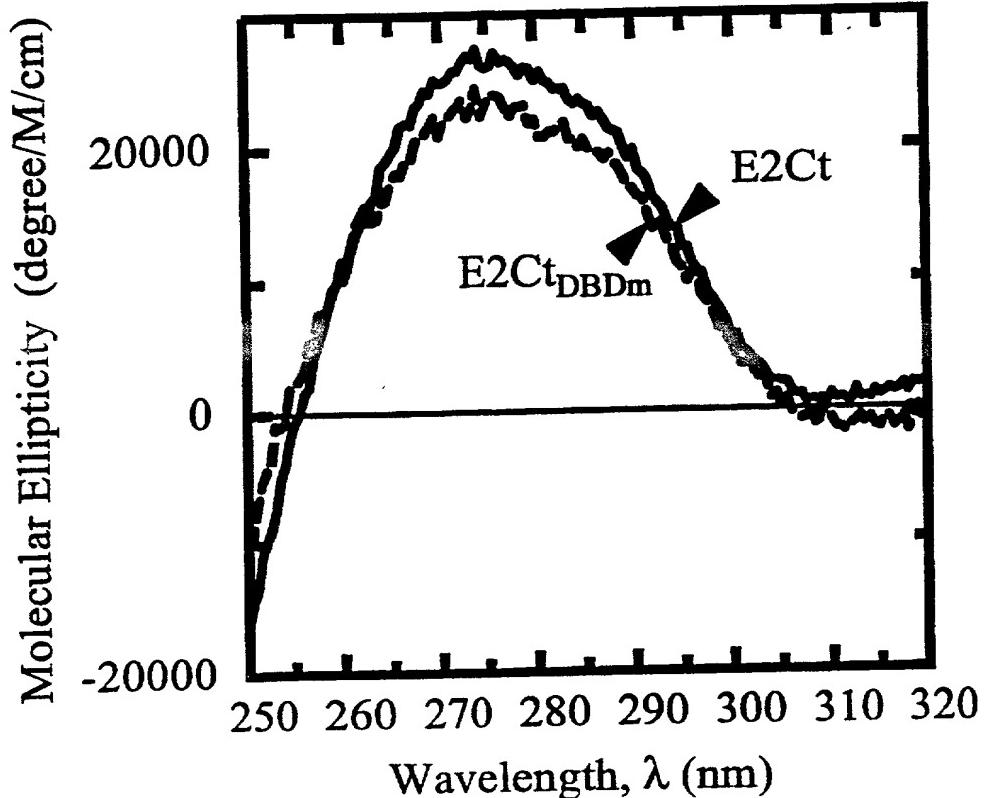
**b**

Fig 5C

C

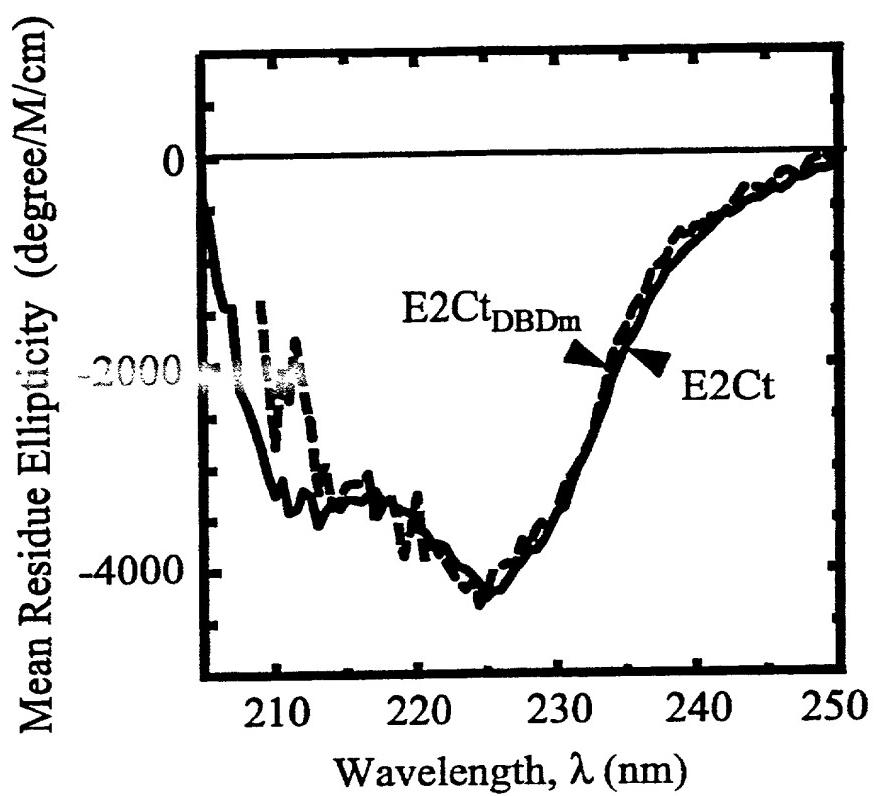


Fig 5D

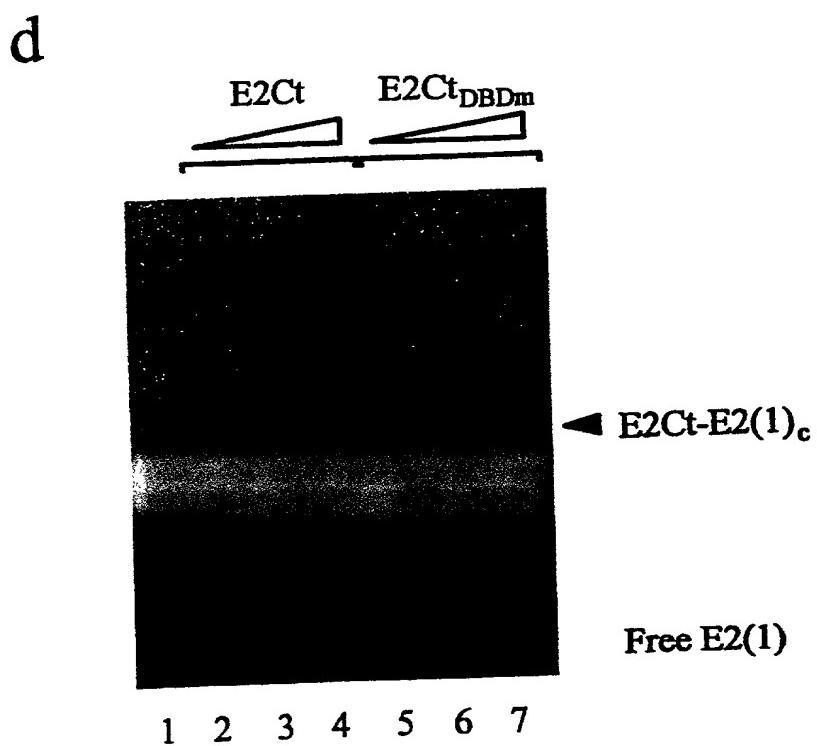


Fig. 6

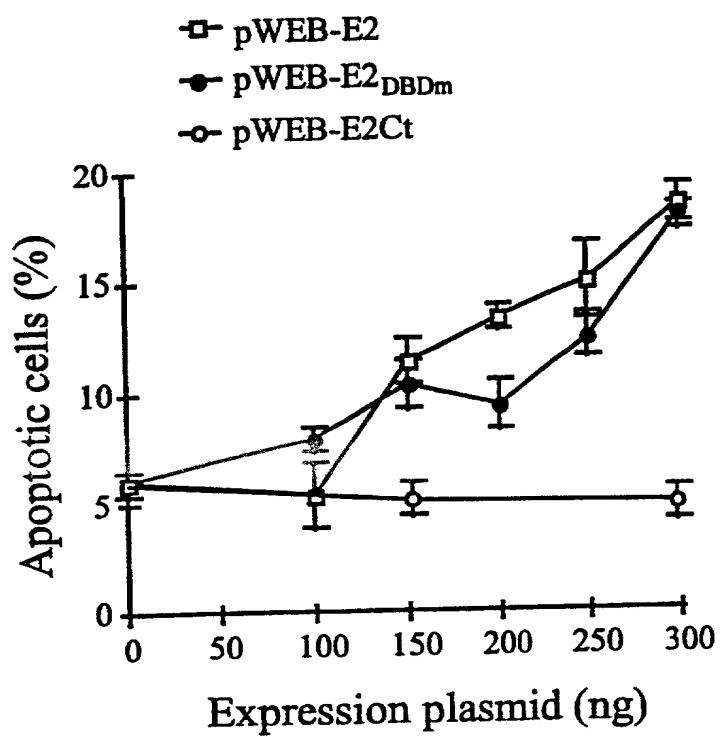
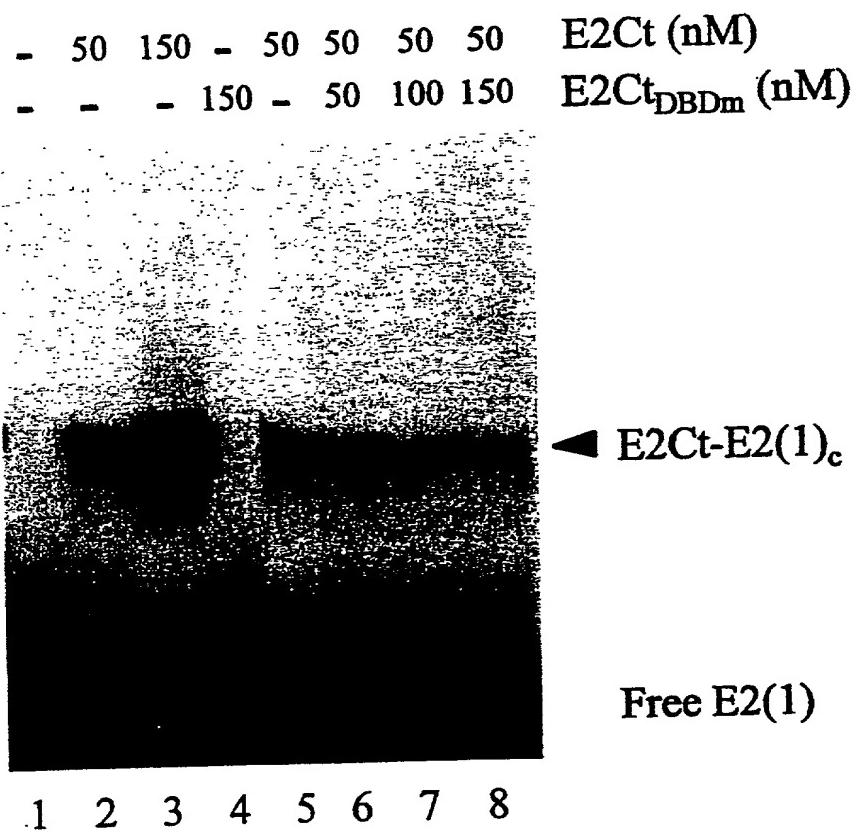


Fig. 7A

**a**

14/23

Fig. 7B

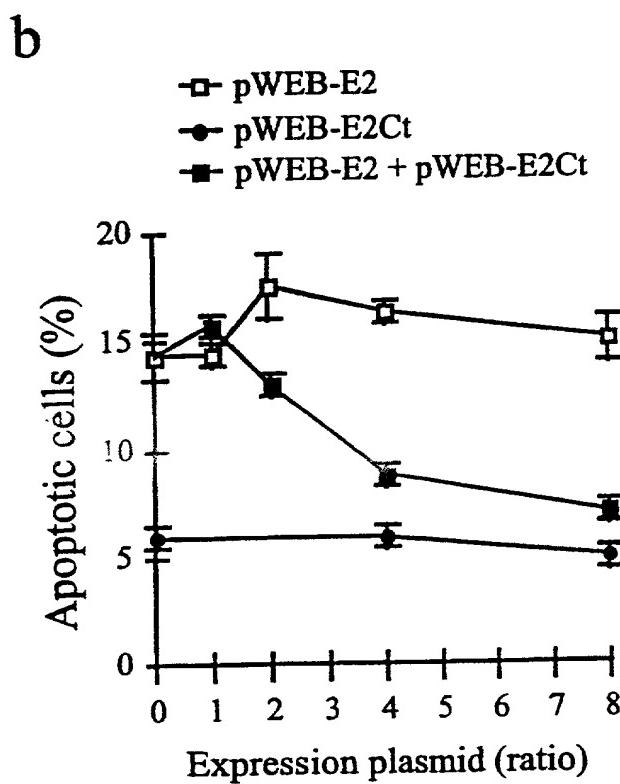


Fig. 8

## The E2 proteins used in this work

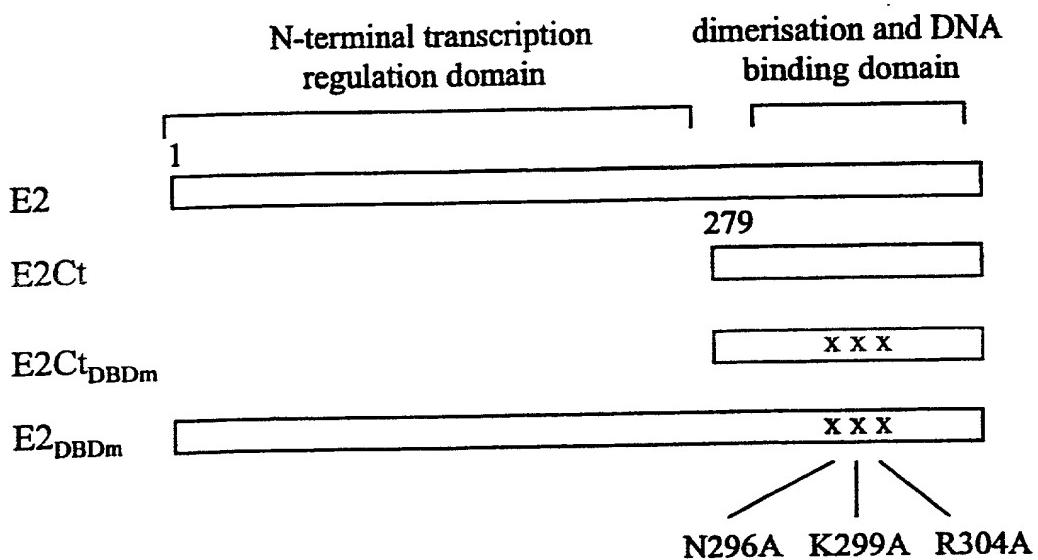


Fig. 9

HPV 16 E2

ATGGAGACTCTTGCCAACGTTAAATGTGTGTCAGGACAAATACTAACACATTATGAA  
 2755 M E T L C Q R L N V C Q D K I L T H Y E

AATGATAGTACAGACCTACGTGACCATACTAGACTATTGGAAACACATGCGCCTAGAATGT  
 2815 N D S T D L R D H I D Y W K H M R L E C

GCTATTTATTACAAGGCCAGAGAAATGGGATTAAACATATTAACCACCAAGTGGTGCCA  
 2875 A I Y Y K A R E M G F K H I N H Q V V P

ACACTGGCTGTATCAAAGAATAAAGCATTACAAGCAATTGAAC TGCAACTAACGTTAGAA  
 2935 T L A V S K N K A L Q A I E L Q L T L E

ACAATATATAACTCACAAATATAGTAATGAAAAGTGGACATTACAAGACGTTAGCCTTGAA  
 2995 T I Y N S Q Y S N E K W T L Q D V S L E

GTGTATTTAACTGCACCAACAGGGATGTATAAAAAACATGGATATACAGTGGAAAGTGCAG  
 3055 V Y L T A P T G C I K K H G Y T V E V Q

TTTGATGGAGACATATGCAATACAATGCATTACAAACTGGACACATATATATTTGT  
 3115 F D G D I C N T M H Y T N W T H I Y I C

GAAGAACATCAGTAACTGTGGTAGAGGGTCAAGTTGACTATTATGGTTATATTATGTT  
 3175 E E A S V T V V E G Q V D Y Y G L Y Y V

CATGAAGGAATACGAACATATTTGTGCAGTTAAAGATGATGCAGAAAATATAGTAAA  
 3235 H E G I R T Y F V Q F K D D A E K Y S K

AATAAAGTATGGGAAGTTCATGCGGGTGGTCAGGTAATATTATGTCCTACATCTGTGTTT  
 3295 N K V W E V H A G G Q V I L C P T S V F

AGCAGCAACGAAGTATCCTCTCCTGAAATTATTAGGCAGCAGCTGGCCAACCACCCGCC  
 3355 S S N E V S S P E I I R Q H L A N H P A

GCGACCCATACCAAGCCGTGCCCTGGGCACCGAAGAAACACAGACGACTATCCAGCGA  
 3415

A T H T K A V A L G T E E T Q T T I Q R  
CCAAGATCAGAGCCAGACACCGGAAACCCCTGCCACACCACTAAGTTGTCACAGAGAC  
3475 P R S E P D T G N P C H T T K L L H R D  
  
TCAGTGGACAGTGCTCCAATCCTCACTGCATTAAACAGCTCACACAAAGGACGGATTAAC  
3535 S V D S A P I L T A F N S S H K G R I N  
  
TGTAATAGTAACACTACACCCATAGTACATTAAAAGGTGATGCTAATACTTTAAAATGT  
3595 C N S N T T P I V H L K G D A N T L K C  
  
TTAAGATATAGATTAAAAAGCATTGTACATTGTATACTGCAGTGTCTACATGGCAT  
3655 L R Y R F K K H C T L Y T A V S S T W H  
  
TGGACAGGACATAATGTAAAACATAAAAGTGAATTGTTACACTTACATATGATAGTGAA  
3715 W T G H N V K H K S A I V T L T Y D S E  
  
TGGCAACGTGACCAATTGGTCTCAAGTTAAAATACCAAAAACATTACAGTGTCTACT  
3775 W Q R D Q F L S Q V K . I P K T I T V S T  
  
GGATTATGTCTATATGA  
3835 G F M S I \* - 3852

Fig 10

HPV 16 E2DBDm

ATGGAGACTCTTGCCAACGTTAAATGTGTGTCAGGACAAAATACTAACACATTATGAA  
 2755 M E T L C Q R L N V C Q D K I L T H Y E

AATGATAGTACAGACCTACGTGACCATACTAGACTATTGAAACACATGCGCCTAGAATGT  
 2815 N D S T D L R D H I D Y W K H M R L E C

GCTATTTATTACAAGGCCAGAGAAATGGGATTAAACATATTAACCACCAAGTGGTGC  
 2875 A I Y Y K A R E M G F K H I N H Q V V P

ACACTGGCTGTATCAAAGAATAAAGCATTACAAGCAATTGAAC TGCAACTAACGTTAGAA  
 2935 T L A V S K N K A L Q A I E L Q L T L E

ACAATATATAACTCACAAATATAGTAATGAAAAGTGGACATTACAAGACGTTAGCCTTGAA  
 2995 T I Y N S Q Y S N E K W T L Q D V S L E

GTGTATTAACTGCACCAACAGGATGTATAAAAAACATGGATATACTGGAAAGTGCAG  
 3055 V Y L T A P T G C I K K H G Y T V E V Q

TTTGATGGAGACATATGCAATACAATGCATTATACAAACTGGACACATATATATTTGT  
 3115 F D G D I C N T M H Y T N W T H I Y I C

GAAGAAGCATCAGTAACTGTGGTAGAGGGTCAAGTTGACTATTATGGTTATATTATGTT  
 3175 E E A S V T V V E G Q V D Y Y G L Y Y V

CATGAAGGAATACGAACATATTTGTGCAGTTAAAGATGATGCAGAAAATATAGTAA  
 3235 H E G I R T Y F V Q F K D D A E K Y S K

AATAAAAGTATGGGAAGTTCATGCGGGTGGTCAGGTAAATTATGTCCTACATCTGTGTT  
 3295 N K V W E V H A G G Q V I L C P T S V F

AGCAGCAACGAAGTATCCTCTCCTGAAATTATTAGGCAGCACTTGGCCAACCACCCGCC  
 3355 S S N E V S S P E I I R Q H L A N H P A

GCGACCCATACCAAGCCGTCGCCCTGGGCACCGAAGAAACACAGACGACTATCCAGCGA  
 3415 A T H T K A V A L G T E E T Q T T I Q R

CCAAGATCAGAGCCAGACACCGGAAACCCCTGCCACACCACTAAGTTGTTGCACAGAGAC  
3475 -----+-----+-----+-----+-----+-----+  
P R S E P D T G N P C H T T K L L H R D

TCAGTGGACAGTGCTCCAATCCTCACTGCATTAAACAGCTCACACAAAGGACGGATTAAC  
3535 -----+-----+-----+-----+-----+-----+  
S V D S A P I L T A F N S S H K G R I N

TGTAATAGTAACACTACACCCATAGTACATTAAAAGGTGATGCTgctACTTTAgcatGT  
3595 -----+-----+-----+-----+-----+-----+  
C N S N T T P I V H L K G D A A T L A C

TTAAGATATgcaTTAAAAAGCATTGTACATTGTATACTGCAGTGTCTACATGGCAT  
3655 -----+-----+-----+-----+-----+-----+  
L R Y A F K K H C T L Y T A V S S T W H

TGGACAGGACATAATGTAACATAAAAGTGAATTGTTACACTTACATATGATAGTGAA  
3715 -----+-----+-----+-----+-----+-----+  
W T G H N V K H K S A I V T L T Y D S E

TGGCAACGTGACCAATTTGTCTCAAGTTAAACCAAAACTATTACAGTGTCTACT  
3775 -----+-----+-----+-----+-----+-----+  
W Q R D Q F L S Q V K I P K T I T V S T

GGATTATGTCTATATGA  
3835 -----+-----+----- 3852  
G F M S I \* -

Fig 11

E2Ct

ATGAACTGTAATAGTAACACTACACCCATAGTACATTAAAAGGTGATGCTAATACTTTAAAATGT  
M N C N S N T T P I V H L K G D A N T L K C

TTAACGATATAGATTAAAAAGCATTGTACATTGTATACTGCAGTGTCTACATGGCAT  
L R Y R F K K H C T L Y T A V S S T W H

TGGACAGGACATAATGTAACATAAAAGTGCATTGTTACACTACATATGATAGTGAA  
W T G H N V K H K S A I V T L T Y D S E

TGGCAACGTGACCAATTTGTCTCAAGTTAAAATACCAAAACTATTACAGTGTCTACT  
W Q R D Q F L S Q V K I P K T I T V S T

GGATTATGTCTATATGA  
G F M S I \* - 3852

Fig 12

**E2CtDBDm**

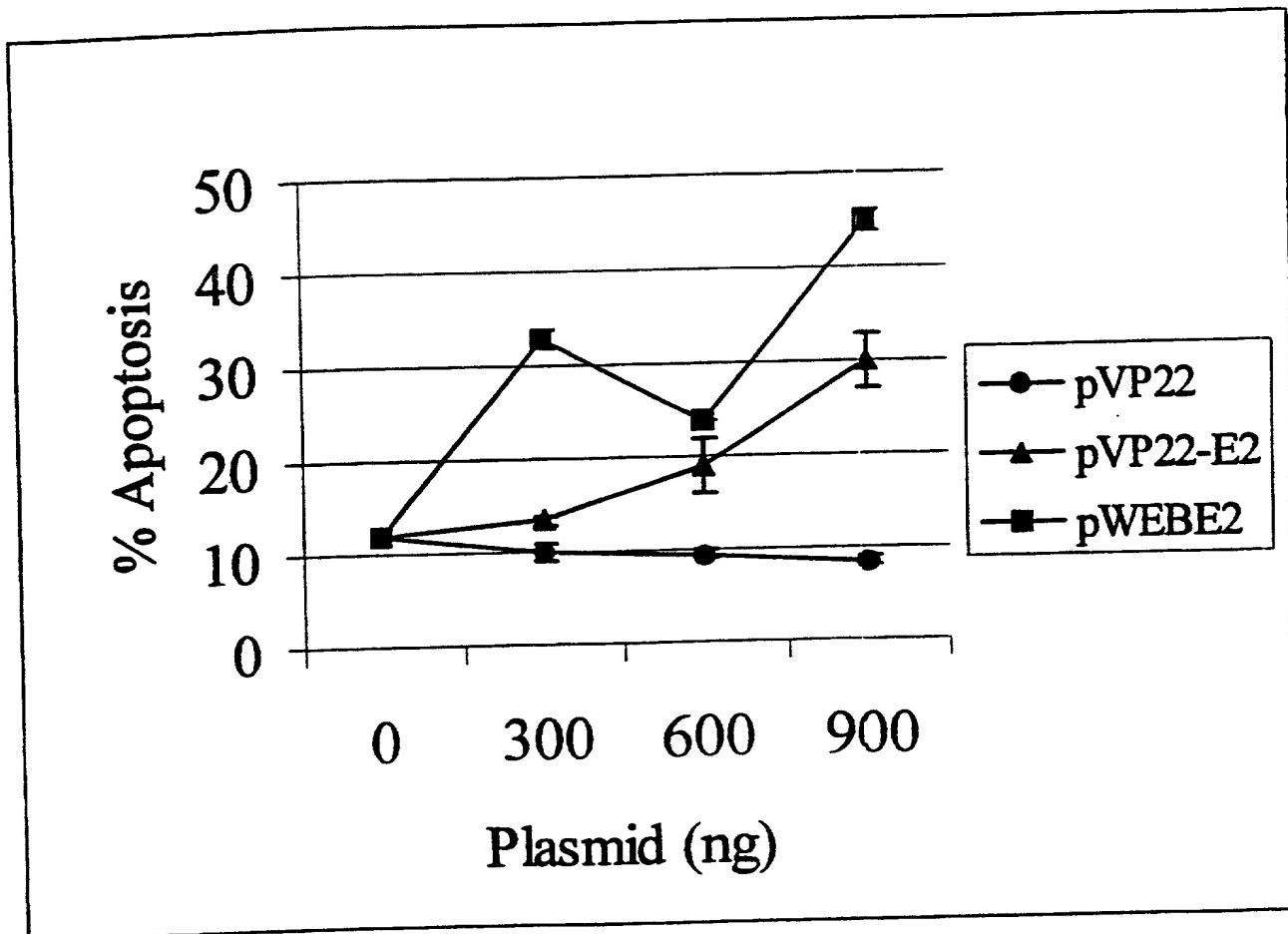
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-----+-----+-----+-----+-----+-----+  
M N C N S N T T P I V H L K G D A A T L A C

TTAAGATATgcaTTAAAAAGCATTGTACATTGTATACTGCAGTGTCTACATGGCAT  
-----+-----+-----+-----+-----+  
L R Y A F K K H C T L Y T A V S S T W H

TGGACAGGGACATAATGTAACATAAAAGTCAATTGTTACATTACATATGATAGTGAA  
-----+-----+-----+-----+-----+  
W T G H N V K H K S A I V T L T Y D S E

TGGCAACGTGACCAATTTGTCTCAAGTAAAATACCAAAACTATTACAGTGTCTACT  
-----+-----+-----+-----+-----+  
W Q R D Q F L S Q V K I P K T I T V S T

GGATTTATGTCTATATGA  
-----+-----+--- 3852  
G F M S I \* -

**Fig 13**

23/23

